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24 SEPTEMBER 1986

## **Worldwide Report**

# **TELECOMMUNICATIONS POLICY, RESEARCH, AND DEVELOPMENT**

**FBIS** FOREIGN BROADCAST INFORMATION SERVICE

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24 SEPTEMBER 1986

# WORLDWIDE REPORT

## TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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HONG KONG

## ARTICLE DESCRIBES WIDEBAND TELECOM NETWORK

Hong Kong HONGKONG STANDARD in English 13 Aug 86 Supplement p 7

[Text]

EXCELLENT communications is a major factor in Hongkong's role as a leading commercial and financial centre in the world. Recognising this, Hong Kong Telephone is committed to providing the most up-to-date and best quality services available to retain Hongkong's position in the world marketplace.

Hongkong's telecommunications network is already very modern and uses the latest technology. Optic fibre cables, digital transmission and digital switching systems are all being used for the high quality performance and ability to provide new services.

Apart from these factors however these innovations also form the basis of a "Wideband Network" which is necessary to provide the telecommunication services of the future.

Circuits provided by the "wideband" network are different from those traditionally provided for telephone service. In the past, the telephone network was developed primarily for voice communications and relied, as it still does today, on pairs of wires between every telephone and the telephone exchange.

Over the last twenty years, requirements have changed and the need for communications services other than voice have arisen from our customers.

Examples are data communications allowing communication between computers and facsimile which allows the transmission of pictures. These needs have been met over existing wiring by using special adaptors called Modems, which enable the transmission of these different signals over the network which were originally designed for voice.

As the need grows and the range of services multiply, a higher quality transmission path becomes necessary providing a wider frequency band width than that used for voice transmission. These circuits are called "wideband" with a frequency band width many thousand times greater than that required for voice.

Hongkong already has a wideband network linking its telephone exchanges using the optical fibre network. Hong Kong Telephone in fact operates one of the largest optic fibre networks in the world. They are used to carry many thousands of telephone calls simultaneously but they can also be used for different signals such as television.

The television link between the Shatin and Happy Valley race courses for example use Hong Kong Telephone's optical fibre network. Extending this concept Hong Kong Telephone is interested in providing a Cable Television network and has submitted a proposal to the Government on the provision of such a service.

A range of other telecommunications services also require the services of a wideband network and include such futuristic concepts as:

**Electronic Publishing:** Rather than buy a newspaper which you discard after it is read, you can view the information in the newspaper on your television screen.

The signals are transmitted at your request over the wideband network, and you select the pages you wish to see by sending command signals from your home back to the transmission point. You could select any page of any newspaper by this means.

**Data Bank Access:** Similar to electronic publishing, it is possible to access the contents of a public data base anywhere in the world and to read the information stored within it.

For example, rather than owning a copy of the Encyclopaedia Britannica which gets more out of date every year, you could have access to a data base which contains the latest version, which is always accurate and updated with the latest information.

The main advantage of this service is that the information you see is always current, whereas printed reference date very quickly.

**Home Shopping:** It will be possible to view a list of products sold by a retailer, and even to see the product on the television screen if wished. If a

purchase is required, an order can be sent from the home to the retailer arranging for delivery.

**Home Banking:** This service goes hand in glove with home shopping, enabling you to pay for your purchase directly from your home. You can also see your latest bank statement and make enquiries about banking services.

**Home Security:** The wideband network has transmission in both directions, so while you are absent you can arrange for a television camera to monitor your home so that a security company can keep watch for you.

**Video Telephony:** It is already possible to have a picture phone service in some countries. But the quality of picture is quite low. A wideband network will make video telephony with high quality pictures a common service.

**High-speed FAX:** Already the requirements of some customers for high speed facsimile with colour reproduction are stretching the capability of the conventional telephone network. This service needs a wideband network to operate effectively.

[Box, p 7]

## ...AND A HOST OF OTHER SERVICES

THERE are other services such as video conference facilities, direct access to directory enquiries for telephone numbers, access to news services which can effectively be provided over a wideband network.

Some of these services are already with us as seen by EPSCO, the electronic fund transfer scheme where customers are able to debit their bank accounts in payment for goods at the point of purchase.

The Viewdata service provided by Hong Kong Telephone's subsidiary

CSL also offer many of the mentioned services and the Datapak service offers a Public Data Network. However the construction of a wideband network only requires Hong Kong Telephone to extend the wideband capability from its "telephone exchanges" to the customer's home or office and these services can be widely accessible to our customers. All that is required is laying a special coaxial cable or optic fibre through existing duct between the exchanges and individual buildings in Hong-kong.

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CSO: 5550/0159



PEOPLE'S REPUBLIC OF CHINA

REMOTE SENSING SATELLITE GROUND STATION RECEIVES PHOTOGRAPHS

HK080959 Hong Kong ZHONGGUO TONGXUN SHE in Chinese 1016 GMT 5 Jul 86

[Text] Hong Kong, 5 July (ZHONGGUO TONGXUN SHE)--According to a report from Beijing, the remote sensing satellite ground station of the Chinese Academy of Sciences, which began operation in May this year, has recently collected its first group of remote sensing photographs of the earth's natural resources.

This ground station, a Sino-U.S. joint venture in science and technology, is China's key project in bringing in advanced technology. The station is composed of 3 sections, namely, microsignal tracking and receiving, digital image processing, and photograph processing. It can be widely used in analyzing geological structures, detecting mineral deposits, forecasting floods and other natural disasters, predicting crop and forest harvesting, formulating urban planning, conducting land management, and monitoring environmental and ecological changes.

The satellite data collected by the ground station cover 80 percent of China's total area, with a radius of 2,400 km (with Beijing as the center).

The test results indicate that the quality of the ground station and the data quality of the satellite reach the world's advanced level. This has made China the second country in the world, next to the United States, whose ground satellite station is able to handle advanced TM (subject mapping instrument) [zhu ti hui tu yi 0031 7344 4940 0956 0308].

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CSO: 5500/4167

PEOPLE'S REPUBLIC OF CHINA

CHINA TO LEASE SATELLITE FOR EDUCATION TV CASTS

OW271405 Beijing Domestic Service in Mandarin 0900 GMT 25 Feb 86

[Text] The State Council has decided to lease an international satellite for use in setting up an exclusive television channel for education broadcasts and gradually establish a nationwide TV education network, according to ZHONGGUO JIAOYU BAO [China Education Journal].

The education channel will be used to train primary and middle school teachers, and to undertake adult education and vocational and technical education. Test broadcasts will begin 1 July 1986. The central authorities will handle the leasing of the satellite and the construction of a satellite television education center, while local authorities will be responsible for building the satellite ground stations and the educational TV transmitters.

The satellite ground stations and the TV transmitters will be built jointly by the local education and radio and television departments under the leadership of the provincial, regional, or municipal people's governments, with investments from local governments and from units which benefit from the broadcasts. The policy is that units that benefit from the broadcasts should take part in the construction and management of the ground stations and transmitters. The satellite broadcast should be fully utilized to benefit as many people as possible. To do so, we should strive to build a ground station and a transmitter in every county in the first 2 years of the Seventh 5-Year Plan and in every village and town in the last 3 years, so that 85 to 90 percent of our population will be covered by the broadcast.

The daytime broadcasts will be devoted to training primary and middle school teachers, while the nighttime broadcasts will be used for adult education and vocational and technical education. During school vacations, both the daytime and nighttime broadcasts will be devoted entirely to training primary and middle school teachers.

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CSO: 5500/4167

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

**GUANGDONG FM, TV BROADCAST**--New frequency modulation radio and television equipment recently installed at relay station in Fengshun County, eastern Guangdong Province, was put into operation on 31 January. With the commissioning of this relay station, the most advanced one in the province with the largest transmission power, more than 20 million people in over 30 counties in eastern Guangdong's Meixian, Shantou, and Huiyang now can receive stereo radio broadcast programs and one more color television channel. [Text] [Guangzhou Guangdong Provincial Service in Mandarin 0400 GMT 31 Jan 86 HK] /12858

**HARBIN OPENS TELEX EXCHANGE SYSTEM**--Our province's first telex exchange system officially went into operation in Harbin today. Telex is a means of communications by teleprinters between domestic and foreign consumers through exchange equipment and circuits of postal and telecommunications bureaus. In the past, telex of our province had to be sent through the exchange equipment in Shenyang. Because of the large volume of business in the Shenyang bureau, consumers had to spend a long time waiting. After the opening of our province's telex exchange system, consumers of the province may communicate directly with other domestic and foreign consumers through the Harbin telecommunications bureau by merely using the codes and numbers instead of going through business registration procedures. After opening of the system, consumers may communicate with all the countries in the world except for South Korea, Israel, Azania [as heard], Namibia, and Kampuchea, and may conduct business exchanges with most provinces and large and medium-sized cities of the country. [Text] [Harbin Heilongjiang Provincial Service in Mandarin 1000 GMT 6 Feb 86 SK] /12858

**NEW SATELLITE TV RELAY STATION BUILT**--Kunming, 7 Feb (XINHUA)--A satellite TV relay station was recently built in the Laoshan Front, Yunnan. Soldiers and residents in Laoshan, Koulinsan, and other border areas will be able to see the programs of the Central Television Station during this year's spring festival. This satellite TV relay station was built with the assistance of the Ministry of Electronics Industry and the Ministry of Astronautics. [Text] [Beijing XINHUA Domestic Service in Chinese 0139 GMT 7 Feb 86 CW] /12858

HEILONGJIANG COMMUNICATIONS PROJECT--Construction of the Harbin long-distance communications project, a key project for Heilongjiang Province during the Seventh 5-Year Plan period, started on 10 July. This project encompasses a 54-meter-high main building, with some 22,800 square meters of floor space, and a 100-meter-high reinforced concrete microwave antenna tower. The main building will be equipped with automatic long-distance telephone, public telegram, telex, and facsimile and picture telecommunications exchange systems, and microwave, optical fiber, coaxial cable, satellite communications and color television transmission equipment. Long-distance telephone lines will be increased to 18,000, more than 17 times greater than the present figure. Investment in this project will total 28 million yuan. The project is planned to be completed in 3 years. [Summary] [Harbin HEILONGJIANG RIBAO in Chinese 11 Jul 86 p 1 SK] /12858

CSO: 5500/4167

CANADA

## GANDALF TO TRANSMIT VOICE, DATA ACROSS BORDER VIA SATELLITE

Toronto THE TORONTO STAR in English 21 Aug 86 p E7

[Text]

OTTAWA (CP) — Telesat Canada, owner and operator of Canada's satellites, has signed a \$1.2 million deal with Gandalf Technologies Inc. to transmit voice and data by satellite across the Canada-U.S. border.

The five-year deal marks the first time business voice and data signals will be beamed to the U.S. via a Canadian satellite, which will be carried by an Anik series spacecraft.

### Vigorous campaign

But the deal is also the fruit of a vigorous Telesat campaign to bring more companies into the space age and encourage the use of satellites to send computer data, instead of using more expensive telephone lines.

"When you go to satellite, it can greatly simplify your operations," Mike Bryan, Telesat manager of corporate communications, said yesterday.

Telesat, owned jointly by the federal government and a consortium of communications carriers, got final approval earlier this year to change its operations so it can sell satellite channels directly to businesses.

Previously, Telesat could only sell channels to broadcasters or carry signals from customers of the country's nine telephone companies.

Telecommunications in Canada has become a multi-billion-dollar

industry and Telesat said satellite communications have the greatest growth potential in the international market.

"It's the one where we see a lot of growth and the one we're out hustling," said Bryan.

The deal with Gandalf will allow the company to beam information between its Nepean data centre, near Ottawa, and its U.S. subsidiary in Wheeling, Ill. The link is expected to be installed and operating by November on the Anik C-2 satellite. Gandalf designs, manufactures and supplies electronic data communications equipment.

The satellite network will connect Gandalf offices through electronic mail — messages sent via computer — and sophisticated information systems.

### Dozen customers

Bryan said Telesat now has about a dozen customers using satellites, among them Imperial Oil, which transmits data and video information between Toronto, Calgary and Tuktoyaktuk, N.W.T.

Des Cunningham, Gandalf chairman and chief executive officer, said saving is one reason the company opted for satellite over other long-distance services.

Customers pay a one-shot price for a link and can add as many earth receivers as they want, anywhere they want. Earth-bound services generally charge by distance.

/12828

CSO: 5520/98



CANADA

## CRTC DECISION LEADS TELESAT TO SHELVE DIRECT-TO-HOME PLANS

Toronto THE GLOBE AND MAIL in English 20 Aug 86 p B2

[Article by Lawrence Surtees]

### [Text]

Telesat Canada says a decision by the Canadian Radio-Television and Telecommunications Commission to regulate unscrambled direct-to-home satellite services runs counter to previous rulings and has caused it to shelve plans to enter that business.

Telesat, the sole domestic communications satellite owner, has been eager to enter the business because it would lead to increased revenue and help to fill its orbiting satellites.

But it has now suspended the operations of its direct-to-home satellite subsidiary, dubbed Anikasting Inc. — the first subsidiary of the Crown corporation — because of the CRTC notice issued in June. Telesat disclosed its decision earlier this month in a reply to the commission.

The CRTC said it intends to regulate any operator that provides scrambled direct-to-home broadcasts, because the service resembles cable television. Such a service, although intended primarily for households that do not receive any broadcasts or cable service, "potentially may compete for the same subscribers," the CRTC said.

The decision reverses a 1984 policy statement on direct-to-home that stated the commission would not regulate scrambled services provided by licensed operators because that would be double regulation.

Telesat termed the CRTC statement "without reasoned opinion" and "preferential" to existing broadcast networks.

Supported by the federal Department of Communications, Telesat was granted an order by the federal Cabinet last year creating the Anikasting subsidiary because of rulings and policy that favored the unregulated provision of direct-to-home broadcast services.

Telesat had planned to line up several private broadcasters, all of which are licensed by the CRTC, to provide a package of different signals to be sold by subscription direct to consumers in remote or underserved areas. Telesat is also regulated by the CRTC, but under telecommunication — not broadcasting — laws.

"Our plans called for putting together a package of programs that would include programming from independent broadcasters in both eastern and western regions of Canada, from pay-television operators and from the specialty channels," said Christopher Frank, a regulatory affairs officer at Telesat and previously program assembly manager at Anikasting.

Although Canadian Satellite Communications Inc. of Montreal is licensed to provide broadcast services to remote and underserved areas, it uses a different technology (lower-powered Telesat satellites) that do not make direct-to-home broadcasting as economically feasible as Anikasting's scheme with the Anik C technology.

Cancom turned down Anikasting's invitation to form a joint venture, so Telesat decided to do it alone. Although it would not erode much of Cancom's market, a venture such as Anikasting would further the objectives of the Broadcasting Act to provide services to every home.

Telesat also had harsh words for Cancom — its second-largest customer:

"In practical terms, the CRTC appears to have presented Cancom with a de facto monopoly position in the direct-to-home market, which it can exploit without any further regulatory or licensing impediment."

Eldon Thompson, Telesat president, discussed the matter late last year at a CRTC hearing on the company's future plans and gave the commission a legal ruling that indicated scrambled broadcasts cannot be regulated because of their nature.

Legal wrangling aside, the Anikasting venture would also permit Telesat to fill some of the unused capacity on its three high-powered Anik C satellites, resulting in stable or lower rates for all customers, the company said in its August submission.

/12828

CSO: 5520/98

CANADA

BRIEFS

SPAR DEVELOPMENT FUNDING--Ottawa has agreed to provide Spar Aerospace Ltd. of Toronto with \$53-million over the next three years to develop improved components for communications satellites. Flora MacDonald, federal Minister of Communications, said the arrangement will create at least 280 high-tech jobs at Spar's plant in Ste-Anne-de-Bellevue, in suburban Montreal. Spar will provide up to \$27-million of its own money over the next five years and has promised a further \$41-million over the six years to follow. [Text] [Toronto THE GLOBE AND MAIL in English 22 Aug 86 p B3]/12828

CSO: 5520/98

HUNGARY

TELECOMMUNICATIONS PROBLEMS IN HUNGARY NOTED

Budapest FIGYELO in Hungarian 7 Aug 86 p 5

[Article by Gitta Takacs: "Are We Connected?" Translation by British PRESS REVIEW]

[Text] The expansion of the information-system is the most efficient means of the improvement of productivity. New communications technology--which used to increase business costs--has become a comparative advantage and a possibility to increase profits--says The Economist in an analysis.

Revolutionary changes take place these days in the field of telecommunication and postal services in countries with advanced electronic industry. Customers--both private persons and public institutions--can use a great number of services based on the telecommunication networks which we have not even heard of in Hungary yet. The use of online data-transmission systems, computer information networks, fax, teletex, videotex, etc., spreads incredibly fast. The lack of these services in Hungary will hinder the work of economic units in a few years just like the lack of telephone-lines does today. It is no wonder that potential foreign partners investing their money in Hungarian enterprises complain a lot about it.

Being quite ignorant about technical questions regarding tele-communication we should point out that all kinds of information-transmission--speech, telex, the transmission of digital data--takes place on the same basic telecommunication line. The quality of transmission and the speed of the transmission of the signals depend on the basic communication equipment.

You could read a lot about the problems regarding the "telephone-situation" in our magazine recently. But only a very few people know about the situation of the so-called "services increasing the value of the postal equipment," telex, data-transmission, fax, teletex and videotex in Hungary.

Out of the 1.5 million telex-transmission-stations in the world, there are 11,000 Hungarian stations through which telex-connection can be established with 170 countries. The "telex-situation" is better than the supply of telephone-lines and in this field Hungary is somewhere in the middle of the "list" in Europe. However, in countries having more advanced technology, the "successor" of telex, teletex is used. This new service of telecommunication is a

mixture of the computerized text-editing system and data-transmission which is able to "pass" letter-like messages written in different kinds of lettering to the addressee. There are about 30-40,000 teletex transmission-stations in the world. According to estimates approximately 2 million teletex-equipment will operate in Western-Europe and the United States by 1990. Most of the West-German companies no longer use telex. In Germany the fee charged for teletex is 80 percent cheaper and the message reaches the addressee in ten seconds. /In every country of the world telex- and teletex-networks are connected to each other./

In Hungary no teletex-equipment is in operation yet. The Hungarian Post-- with the financial support of the National Technical Development Committee-- bought a few teletex-equipment though, they will be used by ministries, foreign trade companies and industry companies. At the beginning they will be used only for information-exchange in the country but maybe by the end of this year we shall be in teletex-connection with West-Germany and many other countries through Germany. According to the analysis of the National Technical Development Committee a national teletex-network could "handle" 20 percent of all the letters posted in Hungary.

A teletex-terminal costs 16,000 West-German marks. One of the conditions of the establishment of a network in Hungary is to produce such equipment also in Hungary. Four big companies "reacted" to the tender advertised by the National Technical Development Committee, the Hungarian Post and the Industry Ministry and the "winner" will be granted more than 10 million forints to develop a teletex-terminal and establish the conditions of production. Yet, there will not be more than 100-200 teletex-terminals in operation in Hungary by 1990. The main reason is that there are too few data-transmission-lines. Teletex cannot be operated on the telex-network--the speed of telex is only 50 bits second as against the speed of teletex which is 2,400 bits second-- but on the online data-transmission network.

The data-terminals of the majority of the computers used in Hungary are based on the telephone-lines. However, telephone is supposed to "transmit" speech and not digital data and that is why information-transmission is slower and more "mistakes" are made than what certain computer-systems can "bear." /Of course, a telephone-network which is functioning properly is able to transmit certain data./ We can say that the situation in this field is even worse than in the field of the "telephone-situation."

It is no surprise that Hungarian experts on computer-technology regarded the opening of a so-called online data-transmission system in 1981--NEDIX-network-- as a miracle. So far no such data-transmission system exists in other socialist countries. The 200 lines were sold very quickly--they cost 150-200.000 forints each--and expansion has taken more than five years but the experts of the Hungarian Post promise to put into operation another 400 lines by the end of this year. By the end of the 7th five-year-plan-period only 1.100 such lines will be in operation. What about demands? There are about 1,800 customers, 600 of them want NEDIX-lines and the rest want to rent data-terminals based on the telephone-network. According to estimates by 1990 there will be demand for 6,000 data-transmission lines.



The majority of Hungarian experts on computer-technology dare to state that until these significant problems are solved, they can hardly do anything about the development of computer-technology in Hungary.

Apart from the lack of financial resources, the shortage of telecommunication lines also hinders the establishment of national computer-systems. Data are "transmitted" on paper-sheets, magnet-plates or by car.

According to 1984 data there were 4 million personal computers in use in offices in the United States and one million of them were online. By 1989 about 25 million computers will be used in the States and three quarters of them will be connected with the central telecommunication network. The communication ability of personal computers in Hungary is only a possibility. How great this possibility is shown by the fact that the technical-technological-scientific data-bases—there are about 3,000 of them in the world—are also used in Hungary. /A data-basis consists of a personal computer, a printer and an equipment connecting the computer with the telecommunication network./ By 1981 the Hungarian Post established connection between the Budapest NEDIX-centre and the Vienna computer-centre of Radio Austria, an Austrian private telecommunication company, through which "we are on line with the whole world." We can get in touch with the data-transmission networks of North-America, Western Europe or the Far East and data are available from Switzerland as well as California, basically all parts of the world.

In 15 countries of Europe—and of course, also in America and Japan—so-called inter-face networks representing more advanced technology and transmitting data faster than online systems are operating. Fortunately, preparations and research have started also in Hungary in this field. A system worked out by the experts of the Computer-Technology and Automatization Research Institute—which is based on a certain type of Hungarian computer—will start to operate this year transmitting data among the various research institutes using 30 lines. The Hungarian Post would like to buy a bigger interface data-transmission centre from a foreign company next year. If they manage to come to an agreement, this will be regarded as another historic step.

In Europe, there are 30 data-centres for every 10,000 citizens. In Hungary only 1.5. Today the majority of the telecommunication services—90 percent—is based on telephone-lines and "sound-transmission." As experts say in ten years time data-transmission will be the most important means of telecommunication. According to my estimates, by that time the proportion of data-transmission centres will be about 1-2 percent compared to that of telephone-lines in Hungary.

There is only one telematic service which works also in Hungary, this is fax. This service is supposed to transmit printed and written documents and the transmission of a page lasts about 1 minute and costs 70 forints. Since August 1985 five post offices in the country and two in the capital city have offered this service and postmen deliver them to the addressees as telegrams. About 30 institutes have fax-machines of their own.



For instance, this is how documents, drawings and plans were transmitted from the Central Physics Research Institute to the Moscow space research centre when the engineers of the VEGA-programme performed research on the Halley's Comet and the Mogart foreign trade company finds the machine also very useful.

Last year every month about 50 pages were transmitted at the post offices. The reason for this "failure" is certainly that Hungary is a small country, there are no significant distances and it takes only a day or two to send a letter. The situation will be likely to change when we join foreign networks which is going to take place this year.

In the world there are nearly as many fax-machines as telexes today. The price of this machine is between 3,000 and 3,500 dollars. The technological requirements of the production of these machines are rather high which is implied by the fact that three quarters of them are produced in the United States and Japan. Hungarian industry could not even cope with the production of photocopy machines and the chances of the production of fax-machines in Hungary are rather thin. The fact that we have to import them from capitalist countries is a factor that limits our purchases.

The establishment of public videotex-service was decided in 1984 and according to plans this service will start to operate in 1987. As experts say the introduction of videotex is an economic as well as technological enterprise. Several institutes should cooperate. The Post establishing the network and managing the service and other institutes supplying the data-basis with information and supplying the network with computers. The smooth operation of the service requires strict coordination and precise incentive and financial systems. Through the videotex-system information can be sold—which has no traditions in Hungary—for instance, articles, recipes, weather-forecast and it is also able to perform electronic transactions, for instance, registering train-bookings, performing bank-transactions, passing messages, etc.

According to plans at the beginning the system will have 120 customers and later on the capacity of the system will be expanded to 700. Institutes like the Agroinform Agricultural Information Centre, the Industry Ministry, Hungexpo, the Meteorological Institute, etc. will be the major customers of the system. The Post charges for these services a certain amount of fee which will have to be paid together with the telephone-bill and a certain amount will be transferred to the information-services.

The Central Telegrams Office of the Post will be in charge of these telecommunication services. As deputy manager Ivan Feczko said 6-7 percent of the sum to be devoted to the development of telecommunication equipment will be spent on the introduction and expansion of these new services. The rest of it will be devoted to the improvement of the basic-network and the "telephone-situation."

It is an interesting technical data that on one cable serving one telephone line 7 slow data-transmission lines or 46 telex-lines can be established or

instead of 12 telephone-lines 20 medium-speed transmission-lines can be operated.

The majority of Hungarian companies, cooperative and small enterprises do need modern telecommunication services badly because they know that data-transmission and telematic services are essential in internal and international economic relations. However, there is a significant lack of harmony between demands and possibilities and between demands and the planned development.

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CSO: 5500/3018

INTER-AMERICAN AFFAIRS

SATELLITE COMMUNICATIONS IN CARIBBEAN AREA EXAMINED

Warning on U.S. Policy

Port-of-Spain DAILY EXPRESS in English 20 Aug 86 p 1

[Text]

**LOCAL and regional telecommunication policy-makers have been warned that the region may be used in a battle between the United States and the International Satellite Organization.**

The warning came yesterday from Lennox Worrell, general manager of Tritel, at a one-day seminar entitled "Satellite Dishes and You" organised by the Association of Professional Engineers of Trinidad and Tobago at Hotel Normandie, St. Ann's.

In a paper titled "Satellite Dishes - International Implications" Worrell outlined what he saw as the looming battle between the International Satellite Organisation, Intelsat, to which this country is a signatory, and the creation of separate American commercial satellite system.

Said Worrell: "US policy promoting its national interests through separate international satellite systems is, in my mind and the minds of others, in direct conflict with its policy to support the global international system operated by Intelsat."

Five separate satellites have received at least conditional authorisation from the US Federal Communications Commission. All five, said Worrell, intend to provide services across the Atlantic, an area which accounts for 62 per cent of Intelsat's global satellite traffic revenue.

Intelsat has a network of 18 satellites and more than 800 earth stations, which links 165 countries, along which travel two thirds of the world's telephone traffic and virtually all international television transmissions.

This said Worrell, "raises the important and pertinent question whether the Principles of Resolution 1721 of the General Assembly of the United Nations and the Treaty on Principles Governing the Activities of States and the Use of Outer Space, etcetera, are no longer valid?"

Criticisms raised by the majority of the 110 signatories of Intelsat, he noted, had caused the US to announce a number of restrictions on the authorisation and operation of US commercial separate satellites. But these he felt, were ineffective. "The problem here in my opinion is that they are generally unenforceable, ineffective or meaningless."

According to one view, said Worrell, the Caribbean and Central American region will be used in the US bid to challenge Intelsat. "One view exists that the path of the heart of the Intelsat system, that is, the 62 per cent slice in the Atlantic region, is through the western Atlantic, namely the Caribbean and Central and Southern America."

Under this view, he said, attempts will be made by separate or US domestic satellites "to provide public telecommunications services through enticements or cut-throat introductory rates in the Caribbean Basin and its environs."

Then, said Worrell in outlining the envisioned plan, Intelsat would be encouraged to match the artificial competition by reducing its charges in the region, which would result in a chain-reaction decrease in the North Atlantic region. The upshot of all this, he explained, would be that Intelsat, faced with losses, would be forced into raising utilisation and other charges by as much as 2.6 times.

Other disadvantages for this country, he said, could include the loss of Intelsat's high reliability networking, among others.

"What would Trinidad and Tobago stand to gain in the long-term from disowning a global system it co-owns, co-manages and uses to its benefit, for other systems in which it has no share of ownership or control and whose facilities it may be either unable to use at all or use only at a financial, technical and operational disadvantage?"

US separate systems, he said, would not provide worldwide inter-connectivity nor have any responsibility to provide guarantees of adequate facilities or continuity and security of service.

He warned: "Beware of the givers of gifts, for there could be national consequences of such far reaching significance that completely dwarf the dubious benefit that the individual, oblivious to, or unconcerned with the national weal, may perceive in the offer."

## Threat of 'Alien Culture'

Port-of-Spain TRINIDAD GUARDIAN in English 20 Aug 86 p 3

[Article by Gail Alexander]

[Text]

**MINISTER** of Works, Maintenance and Drainage Hugh Francis has expressed concern about satellite-transmitted programming on Trinidad and Tobago Television which he said is now assailing the nation with an alien culture.

While Trinidad and Tobago should make use of opportunities for progress offered by satellite systems, he added, the experts must bear in mind possible negative effects which such technology can have on small developing countries.

Mr Francis made these comments yesterday as he addressed the opening of a seminar "Satellite Dishes and You" sponsored by the Association of Professional Engineers of Trinidad and Tobago (APETT).

This was held at the Normandie Hotel and featured presentations on different aspects of satellite dishes by local experts.

Speaking about the use of satellite facilities locally, the Minister noted television programmes currently being broadcast via TTT's recently-installed satellite, and told the gathering that the psychological effects of such programmes should be considered carefully:

### Alien Culture

"While a certain section of the community may be immune to these programmes, TTT's dish is now assailing the public with alien culture, a culture based on consumerism and one which is more developed than ours".

"We have to be concerned about this, and whether the effect of such an assaultment will promote the ethic of materialism here, as opposed to the question of improving the quality of life based on our own national culture."

Mr Francis told the APETT audience that the situation places local culture in a dilemma since reciprocal transmission of indigenous talent to countries abroad is - at this time - difficult to achieve.

"Even our steelband movement is trapped, since in order for it to be accepted abroad it has to undergo a metamorphosis and be adapted so that outsiders will understand and accept it."

"But looking at satellite broadcasts, we notice that no such compromise is made to attempt to shape the foreign product to meet the indigenous culture of this country."

### Negative Effects

The Minister said that Trinidad and Tobago could never hope to lock itself in and forego technological advances offered by satellites, but should at the same time remember the possible negative effects such technology could have on a small developing country.

In so doing, he added, the country should seek to adapt the technology to meet its particular socio-economic needs, as well as implement mechanisms to safeguard its institutions.

Mr Francis suggested that the seminar explore possibilities of introducing two-way communication, which would propagate the country's culture "so that we will not only be the recipient of foreign material."

Regional TV Exchange

Port-of-Spain DAILY EXPRESS in English 21 Aug 86 p 3

[Text] JAMAICA is expected to join Trinidad and Tobago and Barbados soon as part of a three-way exchange of television newscasts to be carried via the satellite facilities in the participating countries.

According to a release from Trinidad and Tobago External Telecommunications Co. Ltd (Textel), the development comes after two years of discussions among regional television broadcasters, external carriers, relevant government authorities, the Caribbean Broadcasting Union and the International Telecommunications Satellite

Organisation (Intelsat).

Textel general manager Lennox Worrell, said the project was one which his company and other external carriers should feel "a great degree of pride and satisfaction in."

Said the release, the idea for a Caribbean news exchange in which all West Indian islands can participate, has been pursued diligently by Textel officials on various fronts. Only countries with an Intelsat Earth Station capability can fully participate in the programme. However, the addition of a television capability to the Eastern

Caribbean Microwave System will provide one way of enabling the other islands to join the exchange, said Worrell.

He however added that such a capability can only be added when the upgrading and digitalising of the system begins in early 1988. But he stressed that the co-operation of all the islands was essential to the success of the operation. Last January, the Caribbean News Exchange project was initiated and during a forthcoming nine-month demonstration period, satellite equipment charges will be waived. ||||

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CSO: 3298/535



BARBADOES

## PLANS FOR TWO ADDITIONAL TV CHANNELS DISCUSSED

Bridgetown SUNDAY ADVOCATE in English 3 Aug 86 p 1

[Text]

In another three months, Barbadians will have the choice of three television channels on the state-owned Caribbean Broadcasting Corporation (CBC).

Two Subscription Television (STV) channels estimated to cost \$3 million, are to come on stream by November alongside the present Channel "3", which will become Channel "9" in the planned development.

Professor Mickey Walrond, Chairman of the CBC, hosted a press conference at the corporation's Pine Studios yesterday to talk about the development changes at the island's only television station.

Originally, the plan was to introduce four new channels, but Professor Walrond said that the new CBC Board, appointed after the new Democratic Labour Party came to power in May, had made recommendations that the corporation should go ahead with its redevelopment — but in a modified form.

### Starting

"We are starting with two channels rather than four," the CBC Chairman said.

One of the STV channels will be a combination of sports and educational material and the other will be a movie channel. The channel now being used will continue to be free but there will be a fee of \$25 per month for one STV channel or \$25 for the two.

"We intend to have an improvement in programming content by broadening the scope and the choice that viewers will have," Professor Walrond said while alluding to the criticism of the CBC's programming.

He said that obviously CBC would not be able to satisfy everybody on any individual programme but he hoped that the corporation would be able to have an overall improvement.

### More local

"We hope that one of the channels will be used to put over more local material but one has to

realise that there are some limitations to our capacity for improving a variety of local programmes," he added.

Professor Walrond disclosed that Channel 9 (now Channel 3) would become more locally and regionally focussed. He however gave the assurance that programmes like "Days of Our Lives" would not disappear.

"We will continue with programmes that you are seeing now but we will give input of more local programmes," he stressed.

Broadcasts from Cable News Network (CNN) will still be available on Channel 9.

However, Professor Walrond said that because of CNN's concentration on American news, particularly domestic news, it was not appropriate for broadcast 19 hours a day.

He added that CBC would be looking into the possibility of having a news channel with more local and regional news at different times.

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CSO: 5540/104

BARBADOS

BRIEFS

TV LICENSE APPLICATION--Barbados Rediffusion Service Limited has applied to Government for a licence to set up a television service in Barbados. This was confirmed by reliable sources close to the company yesterday. Rediffusion is a public company which has been operating in Barbados for over 50 years and currently maintains a wired service and the Voice of Barbados. It is understood that the company has committed itself to making a large block of its shares available to the public on the award of such a licence. The new Government shortly after assuming power last May, announced that television licences would be granted to companies apart from CBC. Barbados Rediffusion Service Limited gave the public of Barbados the first television demonstration in February, 1959. Two 15 minutes shows were televised from studios in Trafalgar Square to viewers in the then Central Foundry Car Park. An estimated 6000 people saw each performance. [Text] [Bridgetown BARBADOS ADVOCATE in English 8 Aug 86 p 1]/12828

CSO: 5540/104

BRAZIL

EMBRATEL NOT TO USE MIDDLEMEN TO RENT BRASILSAT

PY271817 Sao Paulo O ESTADO DE SAO PAULO in Portuguese 22 Aug 86 p 22

[Text] Rio de Janeiro—"Embratel [Brazilian Telecommunications Company] will not take any action that could result in a loss of income." Communications Minister Antonio Carlos Magalhaes made this statement yesterday in Rio de Janeiro thus denying that private enterprises would be allowed to commercialize the channels (transponders) of the Brazilian satellite Brasilsat.

After stating that Embratel "will never serve private interests to the detriment of its own interests," the minister admitted, however, the need to have a continuous income to pay for the satellite. He denied that the government is willing to lease part of the satellite services through the enterprise Victory Communications Ltd., which is made up of the association of the Italian group Victory with Bradesco [Brazilian Discount Bank] and Comar Enterprises (of the Globo system).

After stating that the government will not give up its position "no matter how large the bank or how strong the personal friendship," Magalhaes stated, answering questions at the 19th National Informatics Congress, that the Communications Ministry is preparing a decree to address this problem.

Asked whether he was in favor of ending Embratel's monopoly of the flow of data sent abroad, a measure also defended by the United States, the minister stated that he is against it: "We will soon have a solution to this problem that will surprise everyone, because we are going to act in the field of our adversary" [vamos agir no campo dos adversarios] (referring to the United States).

Magalhaes denied that the recent decree issued by his ministry, establishing norms for the transfer of informatics technology abroad may interfere with the work of the Special Secretariat of Informatics (SEI). However, he criticized the SEI by saying: "As far as interference goes it is the SEI that is interfering with the ministries. Now that the country is struggling for debureaucratization, I find it rather amusing when someone defends the SEI."

On his position against the principles of market reserves defended by SEI, Magalhaes stated that this is an issue as any other is subject to changes. However, he made it clear that the current informatics law will be respected according to the terms established by National Congress.

According to Magalhaes, the president of the republic will have no difficulties when he travels to the United States, first of all, because of the effectiveness of Brazilian diplomatic policy, and the sound judgment of the United States. "We are mature enough to handle pressures from the United States or the Soviet Union," he said.

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CSO: 5500/2077

CHILE

CTC UNION LEADERS ISSUE DOCUMENT PROTESTING PRIVATIZATION

Santiago ANALISIS in Spanish 22-28 Jul 86 (insert)

["Letter to Chile" signed by Miguel Duarte Diaz, secretary; Miguel Morales Lobos, treasurer; and Rene Mancilla Marin, president of the National Telephone Union]

[Text] The CTC [Telephone Company of Chile] is an enterprise whose function is of vital importance to the nation, both economically and strategically.

Chile's economic program requires an infrastructure in which communications play a vital role of transmitting reactions between parties, promoting the efficiency of production, increasing the certainty needed for making decisions, and providing the economy with an invaluable and irreplaceable level of information.

Moreover, the development of communications and of telephone service in particular helps to maintain and strengthen ties with border regions and areas in the interior of Chile. This obviously fosters national sovereignty.

Because of its vital importance, control of telephone communications involves a source of social power whose impact is inescapable in any decision affecting this sector.

In addition, because of the limited size of the Chilean telephone market in relation to the optimum operating scale for telephone services, it is an absolute monopoly in our country. In fact, the CTC serves over 95 percent of the national market, and the new companies which have appeared are in a shaky financial situation.

This combination of reasons, whose validity and relevance are common knowledge both nationally and internationally, has moved us, as CTC workers, to bring up for public discussion the intentions expressed by the CORFO [Production Development Corporation] authorities and company executives. We are referring to the so-called privatization of state enterprises, including the Telephone Company of Chile.



The importance of this step in economic, strategic, social, and even political terms obliges us to present to the government authorities and to all those who would be affected a brief analysis of the effects of this CTC privatization.

1. Given the characteristics of telephone communications, it is important that communications policies be designed to complement and support the National Development Policy, so that they will effectively promote and foster national objectives, and will not impede or hinder in any way advances made in productive or social areas.

In consideration of this crucial aspect, it is clear that state ownership is a decisive factor in the contribution which communications make to national development. Only state ownership guarantees the coherence of the various levels and areas involved in an overall development strategy.

Private ownership, on the other hand, has as its sole orientation the profits earned from investments. Obtaining high returns, especially in the case of businesses like the CTC, is in contradiction with any government's need for autonomy to disseminate its development policies.

2. Another factor of vital importance is the strategic role communications play in social and geopolitical development. State ownership guarantees that this fundamental factor will remain under state control. Consequently, it operates according to a criterion of social benefits, which differs substantially from the private criterion of income-yield capacity. This conclusion has been established by both theoretical and empirical research.

The criterion of private income-yield capacity means that decisions are based on the relation between profits and costs. This entails steps which may cause serious damage to the nation.

At the present time, there are 28 localities which are served by 94 percent of all the lines in operation. The other six percent of the lines serve 1,151 localities. The social benefits provided by these lines is incalculable, but their private income-yield capacity is negative. This means that, based on the standard applied by a private investor, these 1,151 localities should be left without telephone service, unless it could be made to pay for itself--something which is absolutely impossible.

This would obviously create irreparable damage to any government's objectives and to the nation in historic terms.

3. The Telephone Company of Chile's monopoly, combined with the basic need for telephone service, gives the company the ability to generate huge surpluses which the state now collects. At present, these surpluses amount to over 8 billion pesos. This can be described as monopoly gains, to use the conventional terminology.

This amount is equivalent to over half of what the state could get by selling 51 percent of the stock. In fact, by selling this percentage of its ownership of the company, the state could receive the equivalent of about 14 billion pesos.

So the argument of obtaining resources for the treasury budget is not only unfounded, but it also lacks any common sense. An even greater loss, if the company were transferred to the private sector--which means to the major purchasing powers--would be the control and use of these resources. We should add that the use of these surpluses differs radically, depending on whether they are administered by the state for the nation's benefit, or by private capital for its own interests.

In other words, in strictly economic terms the loss to the state lies not only in selling stock for less than 30 percent of its free market value, but also in its loss of the right to earn and use the surpluses generated by the company.

It is still necessary to add one further point; private ownership will not provide telephone services to the urban and rural groups who have been waiting longest for it, for these services will require financial assistance, based on the principle of social benefits. Only the state can fulfill this function, in accordance with its purpose of serving all the citizens.

4. All this argues in favor of state ownership of the Telephone Company of Chile. Nonetheless, we feel that some major defects have appeared in its management recently.

The company's management has carried out technological improvements whose results are not wholly convincing. The selection of Thomson equipment for line expansions was made against the recommendations of the technical department, which ranked Ericsson equipment in first place for both technological and economic considerations. Still, outside factors carried more weight in this equipment purchase.

We should say that this Thomson equipment had not been approved in its country of origin when it was purchased, so Chile was used as a technological testing ground by the multinational firm. The costs were inescapable: right now, an NT 35 is to be disassembled to provide spare parts for other Region V plants.

Also in the technological area, electronic equipment has been installed in Colina, replacing the manual system. The cost of this has been transferred to the customer (the "real" cost), raising the cost of telephone installation to 300,000 pesos. Obviously, the vast majority of the local population has now been deprived of access to this service by a problem of costs, and not by necessity.

In urban areas we can see how the technological focus of the present CTC management has given the most privileged socioeconomic groups access to cheap and abundant installation service, while lower income groups are placed on endless waiting lists and have to pay very high installation charges. Who is responsible for this, and what are the objectives of the Telephone Company of Chile's technological policies?

This type of technological decision, combined with the rate structures, has partly helped to raise the company's profits, but it has also further divorced telephone service from the concept of a public utility or a social benefit.

The increase in the company's profits, which the CTC executives have been touting with so much pride, does not seem so spectacular to us, for telephone service is a basic service, and the company holds a natural monopoly. Therefore, making huge monopoly earnings is almost a matter of common sense.

It would obviously be a real achievement to show that per capita phone services are increasing at a steady rate, that new sectors, regions, and localities are constantly being brought into the telephone network, that rates are being set on the basis of social necessity, and that the conditions of telephone workers are improving. But none of this has happened under the current CTC management.

On the contrary, the Telephone Company of Chile shows us a technological orientation which is absolutely dependent on foreign firms, some of which have established poor track records in their previous dealings, and which serve and are organized to serve a privileged minority of the population.

In the area of labor, the company has indices of 13 workers for each 1,000 lines (H/ML), and its goal is to reach 12 H/ML. There has been a steady deterioration in the working and salary conditions of the company's employees, as was shown in the latest collective bargaining negotiations.

The company's management tried to use collective bargaining to create conditions that will facilitate the privatization of the company, and even to make our workers participants in this serious damage to the nation's interest. Over 70 percent of the company's workers opposed this, so we are now in the process of arbitration. Strangely, the workers are defending the interests of the company and the nation, while the executives are defending the interests of the private sector, awaiting an opportune moment to buy the Telephone Company of Chile.

There are still many other problems to be mentioned, not the least important of which are the obscurity surrounding the awarding of bids and contractors' work. All these factors should be considered as indicators showing a company management which is not working in favor of the national interest.

Therefore, our defense of state ownership of the company does not in any way support the present management. We believe it is essential to take steps that will radically correct the company's current orientation. This, combined with state ownership, may once again make the Telephone Company of Chile something that we have already known: a state enterprise concerned about maintaining the social well-being of our citizens.

For all the preceding reasons, we are calling upon everyone who may be concerned about and affected by this privatization measure to oppose it energetically, for it is a serious threat to the nation and to all Chileans.

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CSO: 5500/2075

CHILE

DOMESTIC MARKET TO FILL SIGNIFICANT PORTION OF CTC'S NEEDS

Santiago LA NACION in Spanish 22 Jul 86 p 9

[Text] This year the CTC [Telephone Company of Chile] will spend close to 3 billion pesos to purchase spare parts and materials for its operations. Of this amount, 1.785 billion will be spent on products made in Chile.

The general manager of the CTC, Col Gerson Echavarria, announced this yesterday. He said that "the company is working to establish closer ties with Chilean industries, so it may increase its purchases from the domestic market."

He made these comments during the inauguration of the CTC's "Exposition of Demand," which opened yesterday at the Production Information Center of CORFO [Production Development Corporation].

Present at the opening ceremony were: the vice president of CORFO, Brig Gen. Fernando Hormazabal; the minister of transportation and telecommunications, Gen Enrique Escobar; the president of the Confederation of Production and Trade, Jorge Pontaine; the president of SOFOFA [Industrial Development Association], Ernesto Ayala, and businessmen and telephone company executives.

Shortly before officially inaugurating the display, the manager of CORFO, Col Guillermo Letelier, noted the importance of such exhibits, which stimulate joint efforts by the state and the private sector to develop the nation's production.

The Exhibit

The CTC's general manager, Col Gerson Echavarria, said: "There is a great deal of equipment that could be manufactured in Chile in sufficiently attractive quantities to appeal to Chilean industrialists." He added that the CTC's exhibit "is continuing to promote the replacement of the imported goods we use, by encouraging our national private sector."

He pointed out that "this exhibit of some of the goods the company needs to provide its services is designed to serve as a bridge between the company



and national industry, so that Chilean industrialists and potential manufacturers will have an opportunity to learn from this physical presentation, including photographs and a catalogue with 1,200 technical specifications, about the entire range of imported goods which the company uses."

In the display hall--located at Moneda 921 in Santiago--the industrialists will be greeted by expert personnel who will provide ample information about the types of materials needed, and the amounts and occasions in which they are required.

He pointed out that "the CTC's participation in this 'Exposition of Demand' is part of the government's general policy designed to decrease the amount of foreign currency spent on imports, with the consequent benefit of stimulating the national economy and of increasing employment."

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CSO: 5500/2075

INDIA

BRIEFS

**AIR STATIONS PLANNED**—Although there will be more than 200 radio stations in the country in the year 1990, 9% of the land area and 2 1/2% of the population will not be covered by All India Radio in the Eighth Five-Year Plan. The Consultative Committee of Members of Parliament for Information and Broadcasting Ministry was informed today that AIR was trying to increase programmes in the daytime paying special attention to the border and tribal areas. The number of radio stations is proposed to be increased from 91 to 203 by the end of the Seventh Plan period. AIR has been given Rs 700 crores with another Rs 57 crores for the modernization of its studios. The Minister of State, Mr. V. N. Gadgi, told the members that the new stations would have the latest equipment. AIR proposed to cover 97.5% of the population and 51% of the country's area by the end of the Seventh Plan. Nearly 20% of the broadcasting time was devoted to news and current affairs programmes. The Minister said that revised guidelines for sponsored TV programmes had been issued to Doordarshan. The telecast rates for regional feature films has been revised. [Text] [Calcutta THE STATESMAN in English 7 Aug 86 p 11] /13104

**REMOTE SENSING CENTER**—The proposed Remote Sensing Centre of Bihar here, to be completed in 1986-87, would help optimum development of available natural resources, framing of environmental plans and identification of areas for development in the State, reports PTI. The Joint Secretary, Department of Science and Technology, Mr. Umakant Nanda, said the RSC would coordinate research on problems and process them for the development of Bihar. He added that the RSC would be equipped with the latest technological know-how suited to the heterogeneous, economic and geographical conditions of the State. Sophisticated remote-sensing-instruments like multispectral additive colour views, the dual densi-meter, the spectro-radiometer and the microfiche camera system for visual interpretation of imagery, measuring density of aerial films and spectral radiances of the surface and storing and retrieving data from satellites would be installed at the RSC. [Text] [Calcutta THE STATESMAN in English 5 Aug 86 p 10] /13104

**MICRO-EARTH STATIONS**—The public sector Indian Telephone Industries (ITI) has signed a memorandum of understanding with the Equatorial Pacific International Company (EPIC) to set up a joint venture for manufacture of low-cost micro-earth stations for satellite communications using the "spread spectrum" technique, reports PTI. The ITI-EPIC joint venture will have a capacity for manufacturing around 2,000 micro-earth stations per annum and will fully meet

the indigenous requirements. The technology will make it possible to set up computer-based information management system which will in turn significantly improve planning, project management and operations management on a country-wide basis, official sources said. The sources said the National Informatics Centre (NIC) would be the first in the country to set up a large satellite-based computer network termed "Nicnet" based on this technology. It will initially have about 500 micro earth stations, one in each district of the country. The network would be subsequently expanded to have 2,000 micro-earth stations within a two-year period. [Text] [New Delhi PATRIOT in English 4 Aug 86 p 5] /13104

**NATIONWIDE COMPUTER NETWORK**—The Union government plans to set up a nationwide network of computers to collect, collate and analyse information to aid decision-makers plan and monitor development work. This was disclosed by the minister for science and technology, Mr. Shivraj Patil, while addressing the participants in the first in-depth training programme in computers for IAS officers conducted recently here. It was conducted as a part of the human resources development programme by the Computer Maintenance Corporation Limited. Participants in the week-long programme included state chief secretaries and other senior and middle-level IAS officers. Mr. Patil, in his inaugural address, underlined the need to break the resistance to the use of computers in the country. The course focussed on hands-on experience and acquaintance with different types of computers and word processors at the computer centres in South Extension and Parliament Street. [Text] [Bombay THE TIMES OF INDIA in English 3 Aug 86 p 5] /13104

CSO: 5550/0158

ISRAEL

BRIEFS

**U.S.-ISRAEL RADIO AGREEMENT**—With Israeli cooperation the United States has taken a new step toward expanding ideological sabotage against the socialist countries and the Arab peoples. Thus, in particular, a U.S.-Israeli agreement has been initialed in Jerusalem, providing for the opening of 16 relay stations on the territory of the Zionist state in the very near future. They will serve the subversive VOA, Radio Liberty and Radio Free Europe radio centers, for which a significant role has been set aside in intensifying the psychological war against the socialist countries. Incidentally, they are also mouthpieces for Zionist forces which make use of the stations for hostile activity against Arab states. [Text] [Moscow Domestic Service in Russian 0230 GMT 2 Aug 86] /12913

CSO: 1807/371

INTER-AFRICAN AFFAIRS

INTERNATIONAL AID FOR WEST AFRICAN TELECOMMUNICATIONS NETS

Frankfurt/Main FRANKFURTER ZEITUNG/BLICK DURCH DIE WIRTSCHAFT in German 18 Jul 86 p 2

[Article by W. An: "Telecommunications Projects Being Carried Out in West African Countries: International Financial Support/German Companies Involved in Several Projects"]

[Text] Frankfurt--In the field of communications, new investments are projected, have been started or have already been carried out in the West African area from Mauritania to Nigeria. The finance support is provided by international organizations (World Bank Group, African Development Bank, European Investment Bank) and individual industrial nations, including the FRG. German enterprises were also considered in the awarding of contracts.

Three projects are important for the development of telecommunications in Mauritania, of which one has already been completed. This project involved the expansion of the telephone networks in the capital city Nouakchott and in the port city Nouadhibou. Secondly, the telephone service is being modernized and expanded through the use of communications satellites. Thirdly, the French firm Telespace in Courbevoie was awarded a contract valued at 47 million French francs for the construction of ground satellite stations in Nouakchott and Nouadhibou. The ground satellite station at Nouakchott was officially opened at the beginning of 1986. Three additional Mauritanian projects involve the construction of a new telephone exchange in Nouakchott, the building of a ground satellite station in Zouerate, and the expansion of the radio telephone service to the southeastern part of the country. In mid-June 1986, Senegal received a \$22 million credit from the International Development Association (IDA) of the World Bank Group for the partial financing of the second telecommunications project.

In the spring of 1984, the FRG gave Guinea a grant of DM17 million to improve the teletype, Gentex and telegraph services and another grant for DM2 million for concomitant measures. The delivery of the needed central teletype office was delegated to Siemens AG, Munich/Berlin. The firm Weidleplan Consulting GmbH, Stuttgart, took over consultation functions. The investments in the scope of this project are to be concluded by mid-1987 and the concomitant measures by 1989. The French public company Caisse Centrale de Cooperation Economique (CCCE), Paris, granted Guinea a credit last year in the amount of



85 million French francs for the automation of the telephone network, for the improvement of accounting in the telephone service, and for the rehabilitation of telephone networks in the provinces.

In May 1986, the World Bank granted the Ivory Coast a credit of \$24.5 million for the partial financing of the second telecommunications project. The European Investment Bank in Luxembourg recently approved a loan of 10 million ecus (1 ecu = about DM2.20) for the same purpose, which is to be used for the procurement of switching systems, Telefax equipment, radio relay and multiplex systems, teletype installations and data processing systems as well as for the repair of the cable networks in Abidjan and in 14 provincial centers. The COCE is also involved in the financing of this project, whose costs are estimated at 60 million ecus. The project is to be completed by 1989.

In Ghana, the secretary for transport and communications recently reported that one can expect a substantial improvement in the telephone service by the end of 1986. A directional radio link is to be completed between the capital city Accra and Bolgatanga in the north of the country, the financing of which was taken over by the Overseas Economic Cooperation Fund of Japan. The Japanese Nippon Electronic Corporation was awarded the contract for the realization of the project. Telephone connections with the neighboring countries are to be functional by the end of 1987. Regional and inter-African funds are financing these projects.

In Togo, the government intends to invest about 7 billion CFA francs (100 CFA francs = about DM0.65) in the period 1985-1990 in the development of telecommunications, more than 90 percent of which will be with international aid. By 1990, the number of telephone connections in the capital city Lome is to double from approximately 5,000 currently to about 10,000. The corresponding costs are estimated at 3.3 billion CFA francs. In addition, the telephone network in the Kara area is to be expanded at a cost of 2.4 billion CFA francs. This project primarily involves the replacement of an obsolete telephone exchange in Kara and connections from there to neighboring cities.

The already-mentioned French public company COCE supports the development of telecommunications in the Liptako-Gourma region, a common border region of the three Sahel countries Niger, Mali and Burkina Faso (formerly Upper Volta). The Republic of Niger received two credits for this purpose. One credit for 1.3 billion CFA francs went to Mali and another for 550 million CFA francs went to Burkina Faso. The radio relay program will be continued with the help of these credits.

At the end of February 1986, the African Development Bank granted the Cape Verde Islands an additional loan of 1.5 million accounting units (1 accounting unit = about \$1.07) for the modernization and development of telecommunications. The Portuguese subsidiary of Siemens AG was brought in as general contractor for the construction of a telephone and teletype network in this island nation. It primarily involved the establishment of telephone exchanges in Praia and Mindelo and a Telex office in Praia. Siemens plants in the FRG and Brazil were also included in this project.

In the spring of 1986, Siemens AG reported that in only 30 months in Nigeria it set up one of the largest radio relay networks for telephone, telex and television transmission in Africa. The value of the contract amounted to DM480 million. The directional radio links that open up two-fifths of the country for telecommunications and that connect the south with the northern regions are 6,000 kilometers in length. In addition, 300 kilometers of coaxial cables were laid. Among other things, the project included the construction of 110 directional radio towers with a height of up to 140 meters. Siemens AG also trained about employees of the Nigerian state postal administration. In the meantime, Siemens AG was awarded another contract for the expansion of the Nigerian telecommunications network. In the spring of 1986, the British Teleconsult booked a contract valued at 3 million pounds sterling for the reorganization of Nigerian telecommunications.

9746

CSO: 5500/98

LIBERIA

COUNTRY MAY FACE SATELLITE COMMUNICATIONS BLACKOUT

AB292207 Dakar PANA in English 1933 GMT 29 Jul 86

[Text] Monrovia, 29 July (LINA/PANA)--Liberia risks being cut off from the international communications network unless plans to construct a new earth satellite station in the country were speeded up, the government-owned NEW LIBERIA newspaper has said in Monrovia quoting local experts.

In a front page article captioned: "Liberia Could Face Communication Blackout", the paper Tuesday quoted Liberian telecommunications experts as saying unless "immediate steps" were taken to speed up the construction of a proposed 17 million U.S. dollar earth satellite station, Liberia, could be cut off from the rest of the international community next December when the new international satellite system goes into operation.

The earth satellite system was halted last week after a Liberian Senate committee of inquiry said it had discovered some "irregularities" in the manner the construction of the project was awarded to a Canadian firm by the Liberian Telecommunications Corporation (LTC).

Based on the committee's report, the Senate passed a bill halting construction of the satellite station on the grounds that LTC had committed the Liberian Government to a loan agreement in contravention of constitutional provisions which prohibit loan transaction without legislative enactment.

The Senate also accused LTC of awarding the construction contract to Spar Aerospace for 17 million dollars when other companies had submitted bids lower than that amount. The bill now awaits presidential approval.

LTC managing director, S. Richieulu Watkins expressed shock at the Senate's bill, and said LTC had never entered into any loan agreement to finance the project.

He said, however, that LTC did receive a draft loan agreement from Spar Aerospace which it submitted to the Ministry of Finance and the National Bank of Liberia for evaluation.

Watkins explained that Spar Aerospace was awarded the contract for the project, by the International Satellite Committee (Intelsat), instead of LTC, from among five bidders.

He said because of the December [word indistinct] deadline set for completion of the project, Intelsat has done the evaluation and site selection of the project free of charge to the Liberian Government.

LTC officials said timely construction of the new satellite station would serve Liberia's international and local exchange needs for the next 20 years, and the delay of the project could sever communications links with the outside world for the next generation.

/9716

CSO: 5500/101

**LIBERIA**

**LINA DIRECTOR APPEALS TO ISRAEL FOR ASSISTANCE**

AB122142 Monrovia Radio ELWA in English 2000 GMT 12 Aug 86

[Text] The Israeli Ambassador to Liberia, Mr (Ariel Gibson) has stressed the need to establish an information exchange program between the LIBERIAN NEWS AGENCY, LINA, and the JERUSALEM POST newspaper in Israel. He said such an exchange would ensure an effective dissemination of information between Israel and Liberia, as well as provide avenues for mutual cooperation and understanding among the peoples of the two countries. Ambassador (Gibson) was speaking at his embassy today when LINA director general, (Timanus Kla Williams), paid a courtesy call on him. The Israeli envoy lauded the LINA director general and staff of the agency for their efforts to disseminate accurate information to the Liberian people.

In response, Mr (Kla Williams) extolled the Israeli government for its continued assistance to Liberia, especially in the areas of security affairs, as well as agricultural and infrastructural development. The LINA director general then appealed to the Government of Israel through its envoy in Monrovia to assist in training the agency's staff in Israel. He said this would also help to improve mass communications in the country. Dr (Kla Williams) informed the Israeli ambassador that his agency was in dire need of equipment to further enhance its operations and appealed to all friendly governments to assist in the improvement of existing facilities at LINA. He also extended an invitation to the Israeli envoy to visit the agency to acquaint himself with its operations.

/9716  
CSO: 5500/101



EUROPEAN AFFAIRS

ERICSSON, CGE, ITT DISCUSS DEALS IN TELEPHONE EXCHANGE MARKET

Ericsson Offers To Buy CGCT

Paris ELECTRONIQUE ACTUALITES in French 27 Jun 86 pp 1, 12

[Text] The telephone business in France is faltering. Ten years after the much vaunted Telecommunications Directorate General (DGT) consultation on the adoption of a space switching system--in fact two systems--a new round is underway with consecutive meetings between our minister of industry and PTT and officials from the Ericsson, Philips, ITT, then Siemens groups. The stakes this time are even more significant since it involves, beyond the 16 percent of the French market offered as money of exchange, concluding an alliance likely to ensure the partners' durability. Ericsson is ready to take an interest in the General Telephone Construction Company (CGCT) and become involved in exporting a substantial portion of exchanges from France. ITT does not rule out turning over to the General Electricity Company (CGE) a piece of the market it controls in Europe.

It is not a matter today of criticizing the disputed choices resulting from the 1975 consultation, but of avoiding falling back into the same traps.

One of the major difficulties with the 1975 consultation was the increase in the number of objectives--Frenchification of the industry, selection of a space system, exports--without including the ulterior motives: getting Thomson-CSF into the switching industry, replacing ITT on certain foreign markets, indeed setting in motion a chain reaction to kick ITT out of Europe.

Ten years later, the telephone file is being reopened. There are manifold problems. Is there one solution capable of solving all of them? It would be presumptuous to claim this. What, then, are the priority objectives? For DGT, this involves finding a "second source" in switching, alongside Alcatel. Easy, you will say; the suppliers are champing at the bit and an invitation for appropriate bids would seem the most befitting response. Question: Would this second supplier act as a competitor or partner with Alcatel on the French market? At a time of liberalism, is it an impertinence to wonder about it?

However, for DGT this priority must be set aside: That part of the market given to the supplier chosen will serve as money of exchange. First, to

settle the CGCT problem once and for all, we hope, by ensuring it a level of production, access to the technology, and a spot in exports. But this would also involve reaching an industrial alliance with the foreign manufacturer selected.

Thus the draft CGE-ATT agreement whose advantages we take stock of (ensuring Alcatel a level of radio wave production which would raise it to top rank in the world on a par with NEC), but also the risks of having ATT's enormous financial power dominate its partner and use France as a springboard for ensuring its expansion in Europe and worldwide. Moreover, we know, the CGE-ATT draft leaves the Alcatel switching problem unresolved.

#### Swedish Proposals

This is why the minister of industry and PTT who took over the file bearing the stamp "okayed" from the preceding government hoped to meet other builders likely to offer an alternative to the ATT-CGE plan. Praiseworthy, even if certain people feel that all bets are in.

Among the candidates for a return to the French switching market are Ericsson and ITT. In the presence of several French newsmen Mr Svedberg, president and director general of the Swedish group, pointed out several possible areas of cooperation for establishing lasting relations between Ericsson and France. In switching, Ericsson is ready to take over a partnership (on the order of 20 percent) in CGCT, wholly produce the final digital version of the "Axe" in CGCT factories, share its technology, develop an R&D activity in France, and export from France a substantial portion of production (up to 50 percent, no doubt).

The Swedish group, which makes sales figures of 32.5 billion crowns (equivalent to francs), including 26 billion outside Sweden, takes credit for having, with "Axe 10," the only digital system on CCITT standards, operational as of this moment in the high capacities (57,000 lines in Stockholm). Also involved is a modular system integrating CCITT No 7 signaling, capable of responding, thanks to its APZ 212 control processors (800,000 calls per peak hour!), to the rise in traffic attributable to the new services. The "Axe" totals 14 million lines (7.5 million in service controlled by 64 countries).

In addition to switching, Ericsson wants to "get things moving," in Olivetti style, and exploit the opportunities connected to the liberalism proclaimed by the new French government. Confident of its technology and very competitive, Ericsson offers attractive loans in radiotelephony, office automation and data processing, and in military materiel, with the promise of behaving like a good citizen (R&D and production in France plus exports).

Ericsson could make a good partner...if it were not an Alcatel competitor on all foreign markets. That's its main drawback. In addition, the Swedish group seems isolated and perhaps vulnerable when ATT launches its big offensive in switching. Noteworthy: Ericsson has denied the report making the rounds in professional circles according to which it would suspend its "cable" activity. ITT's concerns are more nearly political and financial. The group has taken note of the desire of European governments and the Brussels Commission to build up a joint policy in the high technologies (thus the Esprit, Race, and Eureka

programs). And even though it considers itself the most European of the American companies, its presence on certain markets in Europe risks being challenged in a few years.

#### ITT Europeanized

On another subject, ITT has some explanations to make to stockholders concerned over profits from "telecommunications" activities. This is partly the reason why ITT gave up the American market in switching.

These two reasons spurred group officials to discuss the possibility of rapprochement with partners in the Old World: in order to become further Europeanized and share in the ever increasing R&D costs in telecommunications.

Various financial setups are being examined. One of the most realistic seems to be the formation of an association bringing together CGE, the Italian STET, the Societe Generale de Belgique, ITT, and other European industrial and financial partners. This complex, relying on the added ITT markets in Europe and the French market, would have the financial capability needed to develop a new generation of exchanges and become part of the four or five large international groups still surviving in switching in the next 10 years.

#### ITT-CGE Deal Afoot

Paris LE MONDE in French 25 Jun 86 p 43

[Excerpts] CGE is reportedly ready to take the plunge. According to the plan currently negotiated, the French group would incorporate its Alcatel subsidiary with ITT-Europe in exchange for minority leadership in the association's stock. The ITT parent establishment would hold 30 percent approximately, while the Societe Generale de Belgique and the public Italian group STET would get 10 percent each. The industrial association thus set up would hold altogether 12 percent of the world market and would have a solid foot in the door in nearly all European countries. ITT's withdrawal, CGE emphasizes, provides the opportunity to get rid of the protectionist barriers in the Old World so that finally a group European in character might be born in the telephone industry. Such a prospect has possibilities for appealing to the government.

But for CGE the operation is also the result of 3 years of confusion. Its absorption of Thomson Telecommunications, decided upon in the fall of 1983, has been more difficult than foreseen. The taxpayers have been hit with more than 2 billion francs in taxes. PTT's have had to increase their purchase prices, contrary to the downward tendency in electronics, to help Alcatel. Production policy has undergone zigzags which have been frustrating to exporters. The group has available an excessive range (models E105, E108, MT) which it has had trouble bringing up to date. The technical advance it still enjoyed in 1983 has faded: Ericsson, ATT, Northern-Telecom have caught up with it. In short manufacturing work has been neglected for the sake of "major" unsuccessful international negotiations by Mr Pebereau.

In 1984 the only question, for the president-director general of CGE, was the American market (40 percent of the world market). There the group enjoyed "double or nothing." Successive contacts were made with Plessey and its American branch Stromberg-Carlson, then GTE, then ATT. An agreement was signed with ATT last July, still subject to government approval. It permitted CGE to sell transmitting equipment to ATT in exchange for the repurchase by the latter of CGCT, another nationalized French business; in other words, in exchange for ATT's entry into the French telephone market. But, contrary to the original objective, this agreement between CGE and ATT provides no outlet for French exchanges. In that area Mr Pebereau is stymied.

The CGE-ITT agreement is thus reaching the right moment for "saving face," but this involves the merger of two weakened firms. From that point the questions are numerous: Will the price to be paid be too high? Will the taxpayer be hit in the pocketbook again? Is it possible to "standardize" products without too many expenditures? Lastly, how to go about managing this heterogeneous consortium? In short, the size and makeup of the new entity represent much less a guarantee of survival than a possible future accumulation with no prospect of solution.

The CGE agreement with ITT is also a way to force a decision by the government on its other agreement with ATT. The authorities will have trouble opposing both: From this viewpoint Mr Pebereau is not lacking in skill.

Even though pressed, the government hesitates. Accepting the ATT-CGE agreement means doing without the other solution which is taking shape for CGCT around Ericsson, a solution which would allow for creating an international alliance combining telephone and data processing between the Swedish group and Bull, Honeywell, Matra, and Jeumont-Schneider. Accepting the ITT-CGE agreement means making the most of a European opportunity. But industrially and financially it is an operation fraught with risks. Moreover, no solution is clear for the French telephone industry: Too many mistakes have been made for 5 years with the approval of the socialist government. All that remains is tossing a coin....

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CYPRUS

**GOALS OF BONAC CONFERENCE 'SIMPLE, EASILY IMPLEMENTED'**

HC070953 Nicosia CYPRUS MAIL in English 7 Aug 86 p 3

[Report by correspondent Olga Konari Kokkonou]

[Text] With concrete plans to revive and reactivate cooperation and beneficial exchanges among the non-aligned countries in the field of communication, the Committee for Cooperation of the Broadcasting Organisations of the Non-Aligned Countries [BONAC] ended its 10th meeting in Nicosia.

Representatives of the broadcasting organizations from 15 countries unanimously decided to deal with the problems created by four years of relative inactivity with modest, easily implemented projects. Such projects would facilitate the free flow of information among the non-aligned, would help the interchange of programmes and the training of personnel and promote cooperation and coordination of activities for the mutual benefit of member countries.

The chairman of the Cooperation Committee, Mr Mohamed Tunis, from Sierra Leone, said the previous lack of coordination and irregular communication among members was the main problem within BONAC which had to be considered in the Nicosia meeting, if BONAC was to survive and continue to promote the ideas of the Non-Aligned Movement.

"In Nicosia, we tried to rationalise what it is exactly that BONAC wants to do. During our deliberations we examined the situation, accepted the flaws and identified the problem areas. And as a result we have appointed a small committee of five countries to meet in Nicosia with the specific mandate to look at all the problems and come up with concrete ideas about what BONAC should be doing and where it should be going and tell us what solutions should be found," he said.

The director general of CBC [Cyprus Broadcasting Corporation], Mr Kiprianou aimed at "the quick and ample flow of information between BONAC's members, the widening and strengthening of cooperation, the enhancement of solidarity on international political and professional matters and the contribution of its members in strengthening peace, deepening international understanding and promoting justice, equality and national independence."



On matters of particular interest to broadcasters the Committee decided to initiate the exchange of radio and television programmes, the joint production of programmes and the development of projects. It has also agreed that members should offer technical assistance to other member countries which need it and to make available training facilities.

Special programmes on the 25th anniversary of the Non-Aligned Movement, the 10th anniversary of BONAC and the International Year of Peace were undertaken by Cyprus, Cuba, Egypt, and Yugoslavia. Such decisions were hailed by many delegates as small but feasible concrete goals.

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CSO: 2729

FRANCE

**NATIONAL ASSEMBLY APPROVES AUDIOVISUAL REFORM PROJECT**

Paris LE FIGARO in French 7 Aug 86 p 6

[Article by S.H.: "Leotard Project's Eleven Basic Points"]

[Text] Even though Francois Leotard's bill has suffered several sea-changes, the overall philosophy of the text has survived.

Creativity in radio and TV will be endowed in 1987 with more generous funding than is enjoyed for the past 2 years; supporting funds for the production companies, which amounted in 1985 to 130 million francs, will be upped to 3 billion francs next year, and 10 percent of the profits from the transfer of TF-1 will be earmarked for radio and TV creative departments. Francois Leotard said so at the close of open debate on his audiovisual communications bill.

State Secretary Philippe de Villiers upped the bidding: "This is a bill made to order for the image-makers." The Minister for Culture also appealed to the public radio-TV service to make a gesture, at least, toward holding down operating costs. Francois Leotard asked members of Parliament for suggestions about expanding the public sector, adding that he would like to get them by 31 December 1987.

The minister said that Radio-France Outre-mer (Overseas radio-RFO) would be getting additional funding for its plans to expand its operations in the Overseas Departments (DOM). He went on to say that the government would be contemplating "two approaches" for FR3: one would be the network's working together with the regional press ("which does not seem very enthusiastic" in his view); the other, establishing some kind of association between FR3 and Channel 7's satellite programing in the European cultural area.

Francois Leotard also said, in response to a question from Francois d'Aubert (U.D.F., Mayenne), that private ownership for Havas "has nothing to do with this bill," and that the government had no wish repeat procedures followed in the TFI transfer. The government also refused to renew discussion of the DGT monopoly on telecommunications.

To make up for it, though, 16 or so amendments drafted by the National Assembly's Cultural Affairs commission, along with some from the Commission on Laws, were accepted by the Prime Minister, not to mention another another 40 or so amendments drafted by the government itself.

Leotard's bill, therefore, has experienced a number of modifications by comparison with the version approved by the Senate, which pose no threat to the overall philosophy of the original text.

In yesterday's edition, we cited major input from the deputies' labors.

Here are the details of these measures, classified under generic headings.

### 1. Concentrations

The agovernment approved two amendments from the Cultural Affairs Commission designed to restrict media concentrations. Its Art.15 calls for criminal sanctions against anyone found exceeding a certain level of saturation by a single medium. In Television, no individual may control more than one national network. And for radio, no one individual may control, in addition to a single national network, more than one regional network reaching a maximum of 15 million viewers. In Art. 33, the government agreed to an amendment sponsored by deputies Barrot and d'Auvert (more restrictive than the Senate's) providing that the CNCL would retain the right of inspection as to distribution of advertising revenues: should it find that there has been abuse of a dominant position in the area of communications, the CNCL shall bear in mind "the state of print publications and of audiovisual communications in the area in question."

2. Advertising: The Assembly rescinded the requirement for prior approval for commercials. In an amendment introduced by deputy Lamassoure (UDF, Pyrenees Orientales), there is a provision making public relations spots sponsored by political parties and groups permissible at times other than those of political campaigns (Art 13). The bill also calls for abolition of the French advertising monopoly, which the Senate had temporarily suspended pending formal installation of the CNCL (Art 50). At a proposal from deputy Pericard(RPR, Yvelines), revenues from advertising by the public sector would be capped in 1988 and 1999 at their 1987 levels (Art. 55). Lastly, for the privately owned channels, the now current 5-percent cap on commercials, limiting them to 5 percent of the total air-time of films shown, is abolished. Movies may be interrupted once, and more frequently only if the CNCL grants them an exemption for commercials (Art, 72 bis).

Stock Transfers: At the government's request, the obligation of privately owned TV companies to obtain approval, transfers of

shares in excess of 5 percent of capital is abolished (Art. 40). Furthermore, aliens may not acquire more than 20 percent of the capital of radio or TV companies broadcasting in French (Art. 44). Lastly, transfer of 50 percent of TF-1's capital to buyer groups must be preceded by sales of shares to station or network personnel and to the public. Conditions governing said transfer shall be reckoned according to those called for under the privatization act (Art. 61 of the bill).

4. **Public Service:** The CNCL may withdraw access to certain frequencies from certain public service networks which "are not necessary to their public service mission" (Art. 28). Further, a bill introduced by Andre Vivien Robert (RPR, Val-de-Marne) calls for expanding its normal services in case of public service strikes (Art. 60).

**Frequencies:** The rules governing duration of permits. That duration is set at a maximum of 5 years for television and a minimum of 5 years for public service radio (Art. 31).

6. **Marketing rights:** The National Audiovisual Institute (INA) may market the archives of public companies at the end of 3 years (instead of 5 years). However, works of fiction and creative documentaries will remain the property of the networks (Art. 51). Furthermore, for 2 years, the privatized channel TF 1 must order a minimum of programs from the French Production Company (SFP): the volume is assessed at half of its orders at the 1986 level. This arrangement is called for in Art. 62.

7. **On-Air Time:** Senate parliamentary groups are barred from the distribution of on-air time earmarked for political parties or groups. That means that only National Assembly groups will have access to free on-air time. National labor organizations and representatives will also have access to air-time, the amount to be set by the CNCL (Article 59).

8. **Privatization of TF 1:** With regard to candidates to take over TF 1, they must state the number of "additional responsibilities" they propose to assume. "The volume and the frequency they intend to set aside for televised newscasts, current events magazines, and documentaries." (Art. 65).

9. **National Commission:** The CNCL can no longer conduct inspections of companies (Art. 18). The makeup of the electoral bodies of the Council of State, the Privy Council, the Court of Appeals, and the Audit Office, each of which shall designate one member of the CNCL, is stipulated (Art. 4). Terms for the 13 members of the commission are neither renewable nor revocable.

Designation and election of commission members shall take place within a maximum of 20 days and one month after publication of the law. (Art. 94).

**RADIO FRANCE INTERNATIONAL:** The president of RFI shall be appointed by secret decree of the Cabinet, at the proposal of the CNCL. (Art. 49).

**11. ABOLITIONS:** Abolished, at the proposal of Michel Pericard: the International Crossroads of Communication (as of 1 October 1986), as will the National Council on Audiovisual Communications.

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CSO: 5500/2724



SWEDEN

ERICSSON'S FINANCIAL CRISIS WORSENS DESPITE TECHNOLOGY SUCCESS

Stockholm DAGENS NYHETER in Swedish 27 Jul 86 p 9

[Commentary by Per Afrell]

[Text] The Swedish electronics "battleship," the telephone and computer company Ericsson, is caught in a storm. Technologically, Ericsson is a success. Economically, it seems to be moving toward a fiasco. A fiasco of this type could mean that Sweden, Inc will not be part of the information industry of the future.

The year 1986 will be yet another economic failure and disappointment. Help will soon be needed—either by making even more drastic cutbacks or by locating partners for the company to work with. Both will probably be needed. It appears that Ericsson's future will be a financial thriller.

For 3 or 4 years the major Swedish export firms have had unprecedented success, with one exception: Ericsson. There, disappointments and changes in strategy have become everyday occurrences and Ericsson stock has become a catastrophe. It has become more profitable to throw half your money into the sea and stuff the other half into your mattress than to invest in Ericsson!

New warning signals have come in recent days. The good news that an important trial order was landed in the key United States market was publicized with the ominous warning that these investments would "be a short-term burden and have a particularly unfavorable effect on profit trends."

Loosely translated from the economic jargon, this means that "it will be a while before things get better."

Central Role

Ericsson's crisis is important because it plays the central role in Sweden's electronics and information industry. Again and again, this industry has been pointed out as being the most important for the future. In addition, after Electrolux, it is the company that employs the most workers—almost 75,000, approximately half of whom are in Sweden.

Ericsson's situation is now extremely critical. There are two different pictures. The positive picture is that Ericsson has managed to develop what is probably the world's best computerized telephone exchange, the AXE.

It has had many large competitors in this battle, but the relatively small Ericsson company has taught them all a lesson. This is a technical achievement that can only be compared with other great Swedish inventions, such as DeLaval's separator or Dahlen's lighthouses.

In addition, Ericsson has broad and highly qualified expertise in the entire field of communications. It dominates the mobile telephone field, is successful in optical cables, is one of the two Swedish companies with advanced chip technology, etc. Technically, the company is the most advanced in the country.

The unpleasant picture is that none of this is helping. Ericsson may never make any profits from its technological knowledge.

Why?

#### Poor Investments

The reason is that Ericsson is running out of money. They may not have enough to stay in the game on their own. Too much money has been lost on poor investments and it has failed to come in when markets did not correspond to expectations.

Normally, this would have been a situation in which the risk capital market, i.e. the stock market, either here or abroad, would step in. Here is a company with an extraordinary product, but with little cash. In such situations, it is usually no problem to attract financial backers.

This path is probably blocked for Ericsson, however. In 1983 the company made a financial blunder. It attracted about 2 billion kronor from American investors, at a price of 450 kronor per share. Today's quotation is 217 kronor. In this situation, it is almost impossible to ask for more money. The board and management have used up most of their credibility on the market.

It all began with an attack of overconfidence during the late seventies. AXE was just out on the world market and was experiencing one success after the other. At that time, Ericsson decided that it would become an alternative to IBM.

With drums and fanfares, the company announced what it called "Sweden's largest industrial investment." Ericsson would produce the complete office of the future. EIS would counterbalance the company's dependence on its telephone activities. Datasab and Facit were quickly bought up and thrown together with Ericsson's own computer operations. The entire operation was called Ericsson Information System (EIS).

## Millstone

This meant that Ericsson had entered an entirely new field in which conditions were completely different from those to which it was accustomed. What was meant to be a pillar of support turned out to be a millstone around the company's neck.

Since then, EIS has been forced to reduce its level of ambition continuously. In 1985 EIS showed losses of just over 800 million kronor when it made major cutbacks.

But that was not enough. The problems at EIS have continued. The computer market both in Sweden and abroad continues to be weak. Most of the many American experts in this field believe that no change will occur before 1987 or 1988.

Today, the growth rate is closer to zero than to the expected figure of 20 percent. In this new situation, the cutbacks have been insufficient and have proceeded more slowly than planned. Under these conditions, EIS is probably far from achieving its goal of breaking even in 1986 and making a profit in 1987.

## Test In United States

While EIS continues to draw resources, the telephone division is receiving some new signals--some good and some bad.

A test of the AXE in the United States;  
War on the telephone exchange market in the United States;  
Restructuring by producers in Europe.

The United States is the world's largest market for digital exchanges. It is estimated to be worth almost 30 billion kronor per year. It is now completely dominated by American Telephone & Telegraph (AT&T) and the Canadian firm Northern Telecom.

Their most important customers are the seven Bell companies, which are large private counterparts to the Telecommunications Service in Sweden. They want an additional supplier, someone to take over third place to guarantee good prices for the Bell companies and to prevent AT&T and Northern Telecom from fixing prices.

Ericsson wants to take over this third place. It must capture 5 to 10 percent of the market in order to survive as a first-class manufacturer of telephone exchanges. There are other companies that also want to take over third place, however. The main competitors are NEC of Japan, Siemens of West Germany, and the English firm GEC-Plessey, through its subsidiary Strombergh-Carlsson.

Siemens received the first trial orders, but it has probably been passed by Ericsson. Ericsson chose to let Bellcore, which is Bell's testing facility, evaluate AXE. Bellcore tested AXE for just over 1 year.

The study, which has not been made public, has now been completed. The best indication of its conclusions is that, during the spring, Ericsson received three trial orders in rapid succession from various Bell companies.

Ericsson has spent billions adapting AXE to United States standards. The hope is that, once the company has entered the market, this will be repayed several times over.

It seems, however, that the payoff will take time. Ericsson's competitors are large and financially strong. The market is attractive and there is an overcapacity of exchanges. Profit margins have been reduced in recent years and this will continue during 1986.

There is a danger that it will become a question of stamina. The companies that survive will be those with the most money, i.e. those that are financially strongest. Ericsson is not among these companies.

The good news about the trial orders does not mean more money, but more costs. The real orders will not begin to come in before 1988—if they come in at all—and the profitable orders are even farther in the future. They probably will not come in before the nineties.

#### Difficult In Europe

There is also cause for concern over what is happening on the European market. In 1985 Ericsson landed an order in England worth 1 billion kronor. Ericsson was forced to make extensive alterations to suit the customer's needs and carry out development work, however. Several additional contracts on the same order of magnitude or greater will be needed before England will become a profitable AXE country. So far, no comparable orders have come in.

On the European continent, perhaps the greatest structural changes ever in the area of telephone exchanges are now taking place. The American giant ITT, which made enormous investments in its own domestic market in the United States, gave up on Europe in February of this year.

Now ITT is trying to sell its extensive European holdings to the French company GEC, with Belgian and Spanish interests in the background. If ITT and GEC go together, the resulting companies will be second only to AT&T in size.

With regard to technology and products, the new combination cannot be compared to Ericsson. ITT's European activities are well established, with strong local roots in several countries, however. That could cause disturbances on the market, delayed orders, etc, but ITT-GEC does not represent a threat to AXE as a product.

## Low Profitability

These events on the markets of EIS and AXE have meant that the expectations of late last year, according to which there would be a genuine recovery after the catastrophic results of 1985, have now come to nought. A difficult situation has become even more difficult. Ericsson is now more vulnerable than ever.

Apart from the new signals that have been received during 1986, the reason for this vulnerability is the extraordinarily low profitability Ericsson has had for a number of years. The economic trend has been just as bad as the technical trend has been good. The economic trend, in outline form, is as follows:

For the past 8 years, profitability has been lower than the market average;

Since 1979 Ericsson has been unable to protect its own capital from the ravages of inflation, despite a sharp drop in the rate of inflation and despite the fact that AXE has now been sold to more than 60 countries. In real terms, i.e. after inflation, the firm's capital has been reduced by 10 percent. The average company on the stock exchange has increased its capital by just under 40 percent;

Since 1980 Ericsson has been unable to finance its own expansion. During the past 2 years the flow of capital has been about minus 5 billion kronor, i.e. the company has been forced to pay out 5 billion more than it has taken in;

Since 1979, the company's solvency, i.e. paid-up capital compared to total capital, has dropped from 32 percent to under 25 percent, even though in 1983 Ericsson made the largest stock issue ever by a Swedish company (before the Electrolux-White issue in 1986).

## Bleak Figures

A company with consistently low profitability, poor solvency, and a negative cash flow is poorly equipped to compete with AT&T, Siemens, NEC, and other giants in one of the world's most development-intensive and strategically important markets. Ericsson's board and management are aware of this.

The constant disappointments have resulted in the replacement of half the concern's leadership, but executive vice president Bjorn Svedberg has remained. Drastic austerity packages have been introduced, cutbacks have been made, and secondary activities have been sold.



Before the latest round of bad news, Ericsson said that its continued efforts would be financed by the more efficient use of capital, but the figures look bleak even if profitability is improved somewhat and capital is used more efficiently. Even if this occurs, Ericsson will receive poor marks for the way in which it has acted in these areas.

Ericsson is probably among the most difficult companies to manage in Sweden. It is difficult to find good leaders. There is no similar company in Sweden and the EIS operation is unique. Any executive vice president who showed such meager results for so long would be a candidate for replacement, but there is probably no alternative to Bjorn Svedberg today.

#### Reinforcement

The strongest reinforcement of management in recent years occurred when Hans Werthen took over as working chairman of the board. This demonstrates the seriousness of the situation.

Hans Werthen is 67 years old and has performed miracles at Electrolux. Electrolux is still his primary responsibility, however, and his experience is mainly with mature, i.e. old, markets. His abilities as an "asset stripper," i.e. a person who sells off parts of a company, were utilized immediately. During 1985 Ericsson sold nonstrategic activities for more than 1 billion kronor.

Ericsson also has an unusual ownership situation. Through an agreement, power at Ericsson is divided between two spheres of interest: Handelsbanken and S-E Bank/Wallenberg. A double command of this type is unique—perhaps because it does not work very well. When Handelsbanken wanted to discuss the leadership question, the other side did not show up.

Together, these two spheres control 70 percent of the votes, i.e. they have full control. Since A-shares have one vote and B-shares have only 1/1,000 vote, the two groups have invested only 9 percent of the capital, i.e. they are taking only 9 percent of the risk. According to the catechism of market economies, this does not always yield the best results.

#### Incompetence

Based on all the disappointments, the board's competence to run a company such as Ericsson must be questioned. Vice chairman Jan Wallander has pointed out repeatedly that predictions are almost impossible to make. Ericsson's incorrect predictions and investments made on incorrect predictions provide a good illustration of this opinion.

The 6-month balance, which will be published in 1 month, will be yet another disappointment. It will be followed by even more sharp cutbacks, primarily within EIS, but probably within other divisions as well.

That may help temporarily. It is doubtful, however, that today's board and management will be able to lead Ericsson out of its difficult situation. This is a serious matter, considering the company's position within the electronics and information industry.

Ericsson must find either financial partners or working partners to share the heavy development costs. These will probably be found in other countries. The question is how today's two power blocs will approach this situation. It appears that Ericsson stock will continue to be an extremely uncertain investment.

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SWEDEN

TELECOMMUNICATIONS AGENCY ACQUIRING SEVERAL FOREIGN COMPANIES

Stockholm SVENSKA DAGBLADET in Swedish 12 Aug 86 p III

[Article by Jerry Simonsson]

[Text] IAL Voice Systems, an electronics firm in England, and Videoboard Holding A/S of Norway are the latest foreign corporate acquisitions of the Telecommunications Service group. Since 1 July this year, the Telecommunications Service has acquired large shareholdings in five new companies, two of which are foreign. The Telecommunications Service is quietly undergoing an enormous foreign expansion--and the Telecommunications Service now has companies from Norway to Singapore.

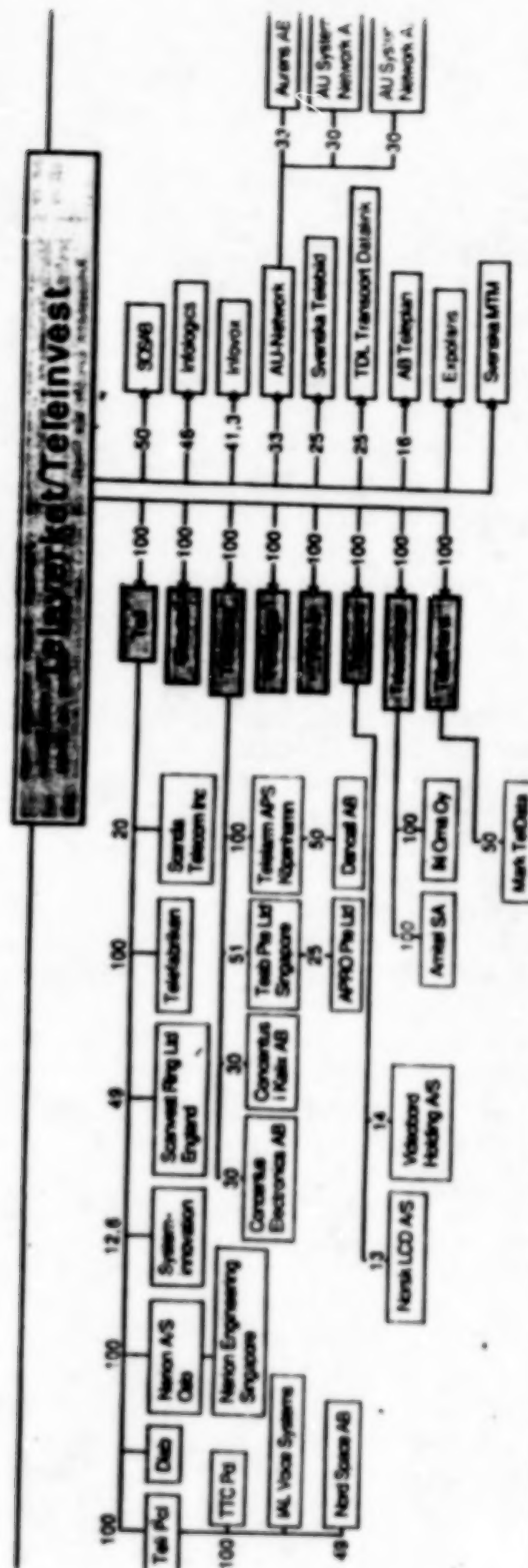
The Telecommunications Service group now consists of a wide variety of production, development, and service companies. New companies have been added to the group, which has now grown into an international conglomerate. The Telecommunications Service has 50 wholly or partly owned companies within its group. Sixteen of these are foreign companies.

Since data and telecommunications have combined more and more into a single unit, the Telecommunications Service is now involved in as many data and data-consulting firms as traditional telecommunications industries.

Some of the acquisitions have been a matter of chance, but on other occasions there have been strategic decisions behind purchases. As a result, there are many odd companies under the Telecommunications Service umbrella. A parliamentary resolution made it possible for the Telecommunications Service to become part owner in Svensk Flygambulans AB, an airline that transports hospital patients. The company's own decision resulted in the incorporation of directory companies in Finland and France.

New Markets

"We have many employees in our Industrial Division and we bear a responsibility for them and for the regions. But the Telecommunications Service is no longer a big enough customer and productivity continues to increase. This means we must seek new markets and channels for our products," said Kurt Katzeff, acting director general of the Telecommunications Service.



Wholly and partially owned subsidiaries of the Telecommunications Service concern. The figures indicate the percentage of capital stock owned by the agency.

Another reason for the industrial activities of the Telecommunications Service, according to Kurt Katzeff, is that the agency wants to help develop telecommunications products in order to stimulate the use of the telecommunications network.

"This also makes it possible to offer customers cheaper products, through special rates to the Telecommunications Service."

#### Bureaucratic Way

Since Ericsson also manufactures products for the Telecommunications Service, the agency's own activities have, at times, been in competition with those of Ericsson.

"Ericsson must have a competitor in Sweden," Kurt Katzeff said.

At present, the purchase of any other company is approved in a bureaucratic way on four levels, with the board of the Telecommunications Service as the highest level. The incorporation of Teli is meant to reduce this unwieldy bureaucracy. It should also facilitate continued trade with companies within Teli.

"The corporate form is the most effective way for us to conduct business. As a corporation, for example, we can receive regional subsidies like other private companies. Our involvement in Eureka would have been impossible if we had participated as a governmental agency."

Kurt Katzeff believes that the industrial activities of the Telecommunications Service will benefit telephone customers in several ways. Internal sales of services and products to the Telecommunications Service reduce costs and, consequently, customer prices. The profits of the various companies show up, to a certain extent, as Teleinvest dividends, but the companies' own dividends are as high as possible and profits must be used, primarily, to generate growth within the companies, so that the economic success of the Singapore company will benefit Swedish customers only marginally.

As a business enterprise, the Telecommunications Service has yield requirements (3 percent, in real terms, of paid-up capital), but its primary task is not to generate profits for the owners, but to maintain a functioning telecommunications network for the people. This task and its constantly expanding industrial activities are a more and more difficult balancing act for the Telecommunications Service to perform. Critics say that the agency must choose one way or the other: privatize the entire Telecommunications Service or sell off the manufacturing companies.

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